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EXAMINER	
ROBERTS, BRIAN S	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/666,600	NEALON, ROBERT J.	
	Examiner	Art Unit	
	BRIAN ROBERTS	2466	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 October 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

- Claims 1-15 remain pending.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/05/2009 has been entered.

Claim Objections

Claims 1, 4-5, 7, 10, 12-13 are objected to because of the following informalities:

- Claim 1 line 16 "the switch controller" should read --the single packet switch control--
- Claim 4 line 17 "the switch controller" should read --the single packet switch control--
- Claim 4 line 17-18 "the external PVCs" should read --the external AAL2 PVCs--
- Claim 4 line 18 "the internal PVCs" should read --the internal AAL2 PVCs--
- Claim 4 line 21 the words for the acronym "SSCS" should be recited.
- Claim 4 line 22 "transcoder node" should read --transcoder--

- Claim 5 line 1 "wherein at least" should read --wherein the at least--
- Claim 7 line 3 "identifiers (CIDs)" should read --identifier (CID)--
- Claim 7 line 15 "the transcoders" should read --the DSPs--
- Claim 7 line 17 "the switch controller" should read --the single packet switch control--
- Claim 7 line 18 "the transcoders" should read --the DSPs--
- Claim 7 line 20 the words for the acronym "CPS" should be recited
- Claim 7 line 21 the words for the acronym "SSCS" should be recited.
- Claim 7 line 22 "transcoder node" should read --DSP--
- Claim 10 line 12 "the switch controller" should read --the single packet switch control--
- Claim 10 line 15 the words for the acronym "CPS" should be recited.
- Claim 10 line 16 the words for the acronym "SSCS" should be recited.
- Claim 10 line 17 "transcoder node" should read --transcoder--
- Claim 12 line 11 "the switch controller" should read --the single packet switch control--
- Claim 12 line 20 "external PVCs" should read --external AAL2 PVCs-
- Claim 12 line 20 "the internal PVCs" should read --the internal AAL2 PVCs--
- Claim 12 line 23 the words for the acronym "SSCS" should be recited.
- Claim 12 line 24 "transcoder node" should read --transcoder--
- Claim 13 line 3 "identifiers (CIDs)" should read --identifier (CID)--

- Claim 13 line 17 "the switch controller" should read --the single packet switch control--
- Claim 13 line 18 "the transcoders" should read --the DSPs--
- Claim 13 line 19 the words for the acronym "CPS" should be recited.
- Claim 13 line 20 the words for the acronym "SSCS" should be recited.
- Claim 13 line 21 "transcoder node" should read --DSPs--

Claim 15 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In reference to claim 1

Claims 1 recites the limitation "PVCs" in line 18. It is unclear whether the antecedent basis for this limitation is the external PVCs or the internal PVCs.

- In reference to claim 4

Claim 4 recites the limitation "the new call" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "PVCs" in line 19. It is unclear whether the antecedent basis for this limitation is the external AAL2 PVCs or the internal AAL2 PVCs.

The limitation "wherein switch packets on a per call basis at a AAL2 CPS layer resulting in fast performance" in lines 20-21 renders the claim indefinite because the limitation does not grammatically make sense, therefore it is unclear what the applicant is attempting to claim.

The term "fast" in line 20 is a relative term which renders the claim indefinite. The term "fast" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 4 recites the limitation "the AAL2 SSCS layer" in line 21. There is insufficient antecedent basis for this limitation in the claim.

- In reference to claim 7

Claim 7 recites the limitation "PVCs" in line 19. It is unclear whether the antecedent basis for this limitation is the external PVCs or the internal PVCs.

The limitation "wherein switch packets on a per call basis at a AAL2 CPS layer resulting in fast performance" in lines 20-21 renders the claim indefinite because the

limitation does not grammatically make sense, therefore it is unclear what the applicant is attempting to claim.

The term "fast" in line 19 is a relative term which renders the claim indefinite. The term "fast" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 7 recites the limitation "the AAL2 SSCS layer" in line 20. There is insufficient antecedent basis for this limitation in the claim.

- In reference to claim 10

Claim 10 recites the limitations "the call" and "the respective transcoder channel" in line 6. There is insufficient antecedent basis for these limitations in the claim.

Claim 10 recites the limitation "PVCs" in line 14. It is unclear whether the antecedent basis for this limitation is the external PVCs or the internal PVCs.

The limitation "wherein switch packets on a per call basis at a AAL2 CPS layer resulting in fast performance" in lines 15-16 renders the claim indefinite because the limitation does not grammatically make sense, therefore it is unclear what the applicant is attempting to claim.

The term "fast" in line 15 is a relative term which renders the claim indefinite. The term "fast" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 10 recites the limitation "the AAL2 SSCS layer" in line 16. There is insufficient antecedent basis for this limitation in the claim.

- In reference to claim 12

Claim 12 recites the limitation "PVCs" in lines 17 and 21. It is unclear whether the antecedent basis for these limitations is the external AAL2 PVCs or the internal AAL2 PVCs.

The limitation "wherein switch packets on a per call basis at a AAL2 CPS layer resulting in fast performance" in lines 22-23 renders the claim indefinite because the limitation does not grammatically make sense, therefore it is unclear what the applicant is attempting to claim.

The term "fast" in line 22 is a relative term which renders the claim indefinite. The term "fast" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 12 recites the limitation "the AAL2 SSCS layer" in line 23. There is insufficient antecedent basis for this limitation in the claim.

- In reference to claim 13

Claim 13 recites the limitation "PVCs" in line 19. It is unclear whether the antecedent basis for this limitation is the external PVCs or the internal PVCs.

The limitation "wherein switch packets on a per call basis at a AAL2 CPS layer resulting in fast performance" in lines 20-21 renders the claim indefinite because the limitation does not grammatically make sense, therefore it is unclear what the applicant is attempting to claim.

The term "fast" in line 19 is a relative term which renders the claim indefinite. The term "fast" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 13 recites the limitation "the AAL2 SSCS layer" in line 20. There is insufficient antecedent basis for this limitation in the claim.

- In reference to claims 2-3, 5-6, 8-9, 11, 14-15

Claims 2-3, 5-6, 8-9, 11, 14-15 are rejected as depending on a rejected base claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paajanen et al. (US 7349404) in view of Jarl (US 2003/0026262) in view of Yoshihiro et al. (US 5239539) in view of Toyama et al. (US 6597696)

- In reference to claim 1-2

In Figures 1, Paajanen et al. teaches a method for using ATM AAL2 switching within a wireless access gateway that includes providing AAL2 CID switching (col. 1 lines 34-36) in a wireless access gateway, the wireless access gateway having a plurality of transcoders **3**, the plurality of transcoders **3** having a subset of transcoders that are available transcoders (col. 5 lines 27-39); allocating individual CIDs (col. 1 lines 34-36) to transcoder channels (*individual call connections between AAL2s and DSPs*) on an as needed basis without a fixed relationship between external PVCs and transcoder channels (*there is inherently not a fixed relationship between external PVCs and the transcoder channels because the transcoder channels are setup dynamically between the AAL2s and DSPs*; (column 5 lines 27-62); switching a call to any one respective transcoder **3** of available transcoders (col. 4 lines 37-43); a Resource Manager and AAL2 connection control is operatively connected to the external PVCs and the transcoders **3** for allocating the individual CIDs to the transcoder channels on an as needed basis. (column 5 lines 27-62)

Paajanen et al. does not teach the Resource Manager and AAL2 connection control being located in a single packet switch control wherein the single packet switch control effects switching of individual packets from the external PVCs and to internal PVCs.

Jarl teaches a single packet switch control **210** that effects switching of individual packets from an external VPI/VPC connection and to an internal VPI/VPC connection that is mapped to one of a group of compression/decompression units **220**. (paragraph 0021)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Paajanen et al. to include the Resource Manager and AAL2 connection control being located in a single packet switch control wherein the single packet switch control effects switching of individual packets from the external PVCs and to internal PVCs as suggested by Jarl because it provides a central controller to assign the CIDs to the individual DSP channels and control switching to the DSPs.

The combination of Paajanen et al. and Jarl does not teach the single packet switch control establishing an even distribution of calls among the transcoders for an uneven call load on the external PVCs.

In Figure 3B, Yoshihiro teaches a main processor **3** that controls the assignment of call processing to call processors **2-1** through **2-N** based on the state of the call processors so that the loads are distributed uniformly among the call processors. (col. 4 lines 34-68)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the single packet switch control of the combination of Paajanen et al. and Jarl to include establishing an even distribution of calls among the transcoders

for an uneven call load on the external PVCs as suggested by Yoshihiro because it prevents a particular DSP from becoming overloaded or under-utilized.

The combination of Paajanen et al., Jarl, and Yoshihiro does not teach transcoding the call from a first format to a second format in the DSPs.

Toyama et al. teaches upper layer processing section **122-1** to **121-M** that may process a CPS-packet payload by converting of the encoding system for a voice signal, which is loaded on the CPS-packet, encryption and decryption, compression and extension, protocol conversion, and media conversion. (col. 11 line 62 - col. 12 line 9)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Paajanen et al., Jarl, and Yoshihiro of to include transcoding the call from a first format to a second format in the DSPs as suggested by Toyama et al. because it allows a voice call payload to be processed at an upper layer, and converted to a second format that is required by an endpoint.

- In reference to claim 3

The combination of Paajanen et al., Jarl, Yoshihiro, and Toyama et al. teaches a system and method that covers substantially all limitations of the parent claim. In Figures 1, Paajanen et al. further teaches the switching of the call to any one respective transcoder **3** of available transcoders is on an as needed basis. (column 5 lines 27-54)

- In reference to claim 4, 6

In Figure 1, Paajanen et al. teaches a method for using ATM AAL2 switching within a wireless access gateway that includes: terminating a plurality of external AAL2 PVCs at an intermediate node **1**; setting up a set of internal AAL2 PVCs between the intermediate node **1** and a set of transcoders **3** that form a plurality of DSP channels; allocating a respective DSP channel (*individual call connections between AAL2s and DSPs*), of the plurality of DSP channels for a call as a function of at least one predetermined parameter; switching individual AAL TYPE 2 CPS-packets (col. 1 lines 34-36) of the new call from an external AAL2 PVC of the plurality of external AAL2 PVCs to an internal PVC of the set of internal AAL2 PVCs on an on needed basis wherein a Resource Manager and AAL2 connection control is operatively connected to the external PVCs and the transcoders **3** for allocating the individual CIDs to the DSP channels on an as needed basis. (column 5 lines 27-62)

Paajanen et al. does not teach the Resource Manager and AAL2 connection control being located in a single packet switch control that is operatively connection to the intermediate node, the PVCs and the transcoder, wherein the single packet switch control effects switching of individual packets from the external PVCs and to internal PVCs by instructing the intermediate node.

Jarl teaches a single packet switch control **210** that effects switching of individual packets from an external VPI/VPC connection and to an internal VPI/VPC connection that is mapped to one of a group of compression/decompression units **220**. (paragraph 0021)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Paajanen et al. to include the Resource Manager and AAL2 connection control being located in a single packet switch control that is operatively connection to the intermediate node, the PVCs and the transcoder wherein the single packet switch control effects switching of individual packets from the external PVCs and to internal PVCs by instructing the intermediate node as suggested by Jarl because it provides a central controller to assign the CIDs to the individual DSP channels and control switching to the DSPs.

The combination of Paajanen et al. and Jarl does not teach the single packet switch control establishing an even distribution of calls among the transcoders for an uneven call load on the external PVCs.

In Figure 3B, Yoshihiro teaches a main processor **3** that controls the assignment of call processing to call processors **2-1** through **2-N** based on the state of the call processors so that the loads are distributed uniformly among the call processors. (col. 4 lines 34-68)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the single packet switch control of the combination of Paajanen et al. and Jarl to include establishing an even distribution of calls among the DSPs for an uneven call load on the external PVCs as suggested by Yoshihiro because it prevents a particular DSP from becoming overloaded or under-utilized.

The combination of Paajanen et al., Jarl, and Yoshihiro does not teach the AAL2 SSCS layer is terminated on a per call basis at a respective DSP.

Toyama et al. teaches upper layer processing section **122-1** to **121-M** that may process a CPS-packet payload by converting of the encoding system for a voice signal, which is loaded on the CPS-packet, encryption and decryption, compression and extension, protocol conversion, and media conversion. (col. 11 line 62 - col. 12 line 9) As such, the AAL2 SSCS layer may be terminated.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Paajanen et al., Jarl, and Yoshihiro of to include the AAL2 SSCS layer being terminated on a per call basis at a respective DSP as suggested by Toyama et al. because it allows a voice call payload to be processed at an upper layer, and converted to a second format that is required by an endpoint.

- In reference to claim 5

The combination of Paajanen et al., Jarl, Yoshihiro, and Toyama et al. teaches a system and method that covers substantially all limitations of the parent claim. In Figures 1, Paajanen et al. further teaches wherein at least one predetermined parameter comprises at least one of a state of the transcoders **3**, a current load on the transcoders, and a state of the internal AAL2 PVCs. (column 5 lines 27-54)

- In reference to claim 7-8

In Figures 1, Paajanen et al. teaches a method for using ATM AAL2 switching within a wireless access gateway that includes providing AAL2 CID switching in a wireless access gateway, the wireless access gateway having a plurality of DSPs **3**;

allocating individual CIDs (col. 1 lines 34-36) to transcoder channels (*individual call connections between AAL2s and DSPs*) on an as needed basis without a fixed relationship between external PVCs and transcoder channels (*there is inherently not a fixed relationship between external PVCs and the transcoder channels because the transcoder channels are setup dynamically between the AAL2s and DSPs*; (column 5 lines 27-62); switching individual packets of a call to any one respective DSP **3** of available DSPs, the available DSPs being a subset of the plurality of DSPs **3**; (column 4 lines 5-36; column 5 lines 27-54) a Resource Manager and AAL2 connection control is operatively connected to the external PVCs and the DSPs **3** for allocating the individual CIDs to the transcoder channels on an as needed basis. (column 5 lines 27-62)

Paajanen et al. does not teach the Resource Manager and AAL2 connection control being located in a single packet switch control wherein the single packet switch control effects switching of individual packets from the external PVCs and to internal PVCs.

Jarl teaches a single packet switch control **210** that effects switching of individual packets from an external VPI/VPC connection and to an internal VPI/VPC connection that is mapped to one of a group of compression/decompression units **220**. (paragraph 0021)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Paajanen et al. to include the Resource Manager and AAL2 connection control being located in a single packet switch control wherein the single packet switch control effects switching of individual packets

from the external PVCs and to internal PVCs as suggested by Jarl because it provides a central controller to assign the CIDs to the individual DSP channels and control switching to the DSPs.

The combination of Paajanen et al. and Jarl does not teach the single packet switch control establishing an even distribution of calls among the transcoders for an uneven call load on the external PVCs.

In Figure 3B, Yoshihiro teaches a main processor 3 that controls the assignment of call processing to call processors **2-1** through **2-N** based on the state of the call processors so that the loads are distributed uniformly among the call processors. (col. 4 lines 34-68)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the single packet switch control of the combination of Paajanen et al. and Jarl to include establishing an even distribution of calls among the transcoders for an uneven call load on the external PVCs as suggested by Yoshihiro because it prevents a particular DSP from becoming overloaded or under-utilized.

The combination of Paajanen et al., Jarl, and Yoshihiro does not teach the DSPs acting as transcoders for digital representation of speech, transcoding the packets of the call in the respective DSP from a first encoding to a second encoding, and the AAL2 SSCS layer being terminated on a per call basis at a respective DSP.

Toyama et al. teaches upper layer processing section **122-1** to **121-M** that may process a CPS-packet payload by converting of the encoding system for a voice signal, which is loaded on the CPS-packet, encryption and decryption, compression and

extension, protocol conversion, and media conversion. (col. 11 line 62 - col. 12 line 9) As such, the AAL2 SSCS layer may be terminated.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Paajanen et al., Jarl, and Yoshihiro of to include the DSPs acting as transcoders for digital representation of speech, transcoding the packets of the call in the respective DSP from a first encoding to a second encoding, and the AAL2 SSCS layer being terminated on a per call basis at a respective DSP as suggested by Toyama et al. because it allows a voice call payload to be processed at an upper layer, and converted to a second format that is required by an endpoint.

- In reference to claim 9

The combination of Paajanen et al., Jarl, Yoshihiro, and Toyama et al. teaches a system and method that covers substantially all limitations of the parent claim. In Figures 1, Paajanen et al. further teaches wherein the switching of individual calls to any one respective DSP (3) of available DSPs (3) is on an as needed basis. (column 5 lines 27-54)

- In reference to claim 10

In Figures 1, Paajanen et al. teaches a method for using ATM AAL2 switching within a wireless access gateway that includes allocating individual CIDs (col. 1 lines 34-36) to transcoder channels (*individual call connections between AAL2s and DSPs*) on an as needed basis without a fixed relationship between external PVCs and

transcoder channels (*there is inherently not a fixed relationship between external PVCs and the transcoder channels because the transcoder channels are setup dynamically between the AAL2s and DSPs*; (column 5 lines 27-62) wherein a Resource Manager and AAL2 connection control is operatively connected to the external PVCs and the transcoders **3** for allocating the individual CIDs to the transcoder channels on an as needed basis. (column 5 lines 27-62)

Paajanen et al. does not teach the Resource Manager and AAL2 connection control being located in a single packet switch control wherein the single packet switch control effects switching of individual packets from the external PVCs and to internal PVCs.

Jarl teaches a single packet switch control **210** that effects switching of individual packets from an external VPI/VPC connection and to an internal VPI/VPC connection that is mapped to one of a group of compression/decompression units **220**. (paragraph 0021)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Paajanen et al. to include the Resource Manager and AAL2 connection control being located in a single packet switch control wherein the single packet switch control effects switching of individual packets from the external PVCs and to internal PVCs as suggested by Jarl because it provides a central controller to assign the CIDs to the individual DSP channels and control switching to the DSPs.

The combination of Paajanen et al. and Jarl does not teach the single packet switch control establishing an even distribution of calls among the transcoders for an uneven call load on the external PVCs.

In Figure 3B, Yoshihiro teaches a main processor **3** that controls the assignment of call processing to call processors **2-1** through **2-N** based on the state of the call processors so that the loads are distributed uniformly among the call processors. (col. 4 lines 34-68)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the single packet switch control of the combination of Paajanen et al. and Jarl to include establishing an even distribution of calls among the transcoders for an uneven call load on the external PVCs as suggested by Yoshihiro because it prevents a particular DSP from becoming overloaded or under-utilized.

The combination of Paajanen et al., Jarl, and Yoshihiro does not teach transcoding the call from a first format to a second format in the DSPs.

Toyama et al. teaches upper layer processing section **122-1** to **121-M** that may process a CPS-packet payload by converting of the encoding system for a voice signal, which is loaded on the CPS-packet, encryption and decryption, compression and extension, protocol conversion, and media conversion. (col. 11 line 62 - col. 12 line 9)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Paajanen et al., Jarl, and Yoshihiro of to include transcoding the call from a first format to a second format in the DSPs as

suggested by Toyama et al. because it allows a voice call payload to be processed at an upper layer, and converted to a second format that is required by an endpoint.

- In reference to claim 11

The combination of Paajanen et al., Jarl, Yoshihiro, and Toyama et al. teaches a system and method that covers substantially all limitations of the parent claim. In Figures 1, Paajanen et al. further teaches wherein the allocating of individual CIDs to transcoder channels is a function of at least one predetermined parameter, and wherein the at least one predetermined parameter comprises at least one of a state of the each of the transcoders **3**, and a current load on all of the transcoders **3**. (column 5 lines 27-54)

- In reference to claim 12

In Figures 1, Paajanen et al. teaches a system for using ATM AAL2 switching within a wireless access gateway that includes a plurality of external AAL2 PVCs; a plurality of internal AAL2 PVCs; a plurality of transcoders **3**; at least one intermediate node **1** operatively connected to the external AAL2 PVCs and to the internal AAL2 PVCs; a Resource Manager and AAL2 connection control operatively connected to the at least one intermediate node, the plurality of internal AAL2 PVCs and the transcoders (column 5 lines 27-62); the at least one intermediate node **1** switching individual AAL2 CPS-Packets (col. 1 lines 34-36) from the external AAL2 PVCs to the internal AAL2 PVCs (col. 4 lines 37-43) wherein the Resource Manager and AAL2 connection control

is operatively connected to the intermediate node **1**, external PVCs and the transcoders **3** for allocating individual CIDs to transcoder channels (*individual call connections between AAL2s and DSPs*)on an as needed basis. (column 5 lines 27-62)

Paajanen et al. does not teach the Resource Manager and AAL2 connection control being located in a single packet switch control that is operatively connection to the intermediate node, the PVCs and the transcoder, wherein the single packet switch control effects switching of individual packets from the external PVCs and to internal PVCs by instructing the intermediate node.

Jarl teaches a single packet switch control **210** that effects switching of individual packets from an external VPI/VPC connection and to an internal VPI/VPC connection that is mapped to one of a group of compression/decompression units **220**. (paragraph 0021)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Paajanen et al. to include the Resource Manager and AAL2 connection control being located in a single packet switch control that is operatively connection to the intermediate node, the PVCs and the transcoder wherein the single packet switch control effects switching of individual packets from the external PVCs and to internal PVCs by instructing the intermediate node as suggested by Jarl because it provides a central controller to assign the CIDs to the individual DSP channels and control switching to the DSPs.

The combination of Paajanen et al. and Jarl does not teach the single packet switch control establishing an even distribution of calls among the transcoders for an uneven call load on the external PVCs.

In Figure 3B, Yoshihiro teaches a main processor 3 that controls the assignment of call processing to call processors **2-1** through **2-N** based on the state of the call processors so that the loads are distributed uniformly among the call processors. (col. 4 lines 34-68)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the single packet switch control of the combination of Paajanen et al. and Jarl to include establishing an even distribution of calls among the DSPs for an uneven call load on the external PVCs as suggested by Yoshihiro because it prevents a particular DSP from becoming overloaded or under-utilized.

The combination of Paajanen et al., Jarl, and Yoshihiro does not teach the AAL2 SSCS layer is terminated on a per call basis at a respective DSP.

Toyama et al. teaches upper layer processing section **122-1** to **121-M** that may process a CPS-packet payload by converting of the encoding system for a voice signal, which is loaded on the CPS-packet, encryption and decryption, compression and extension, protocol conversion, and media conversion. (col. 11 line 62 - col. 12 line 9) As such, the AAL2 SSCS layer may be terminated.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Paajanen et al., Jarl, and Yoshihiro of to include the AAL2 SSCS layer being terminated on a per call basis at a respective DSP

as suggested by Toyama et al. because it allows a voice call payload to be processed at an upper layer, and converted to a second format that is required by an endpoint.

- In reference to claim 13-15

In Figures 1, Paajanen et al. teaches a method for using ATM AAL2 switching within a wireless access gateway that includes providing AAL2 CID switching in a wireless access gateway, the wireless access gateway having a plurality of DSPs **3**; allocating individual CIDs (col. 1 lines 34-36) to transcoder channels (*individual call connections between AAL2s and DSPs*) on an as needed basis without a fixed relationship between external PVCs and transcoder channels (*there is inherently not a fixed relationship between external PVCs and the transcoder channels because the transcoder channels are setup dynamically between the AAL2s and DSPs*; (column 5 lines 27-62); switching individual digital representations of speech of a call to any one respective DSP **3** of available DSPs, the available DSPs being a subset of the plurality of DSPs **3**; (column 4 lines 5-36; column 5 lines 27-54) a Resource Manager and AAL2 connection control is operatively connected to the external PVCs and the transcoders **3** for allocating the individual CIDs to the transcoder channels on an as needed basis. (column 5 lines 27-62)

Paajanen et al. does not teach the Resource Manager and AAL2 connection control being located in a single packet switch control wherein the single packet switch control effects switching of individual packets from the external PVCs and to internal PVCs.

Jarl teaches a single packet switch control **210** that effects switching of individual packets from an external VPI/VPC connection and to an internal VPI/VPC connection that is mapped to one of a group of compression/decompression units **220**. (paragraph 0021)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system and method of Paajanen et al. to include the Resource Manager and AAL2 connection control being located in a single packet switch control wherein the single packet switch control effects switching of individual packets from the external PVCs and to internal PVCs as suggested by Jarl because it provides a central controller to assign the CIDs to the individual DSP channels and control switching to the DSPs.

The combination of Paajanen et al. and Jarl does not teach the single packet switch control establishing an even distribution of calls among the transcoders for an uneven call load on the external PVCs.

In Figure 3B, Yoshihiro teaches a main processor 3 that controls the assignment of call processing to call processors **2-1** through **2-N** based on the state of the call processors so that the loads are distributed uniformly among the call processors. (col. 4 lines 34-68)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the single packet switch control of the combination of Paajanen et al. and Jarl to include establishing an even distribution of calls among the transcoders

for an uneven call load on the external PVCs as suggested by Yoshihiro because it prevents a particular DSP from becoming overloaded or under-utilized.

The combination of Paajanen et al., Jarl, and Yoshihiro does not teach the DSPs acting as transcoders for digital representations of speech, transcoding the digital representation of speech of the call in the respective DSP from a first encoding to a second encoding, and the AAL2 SSCS layer being terminated on a per call basis at a respective DSP.

Toyama et al. teaches upper layer processing section **122-1** to **121-M** that may process a CPS-packet payload by converting of the encoding system for a voice signal, which is loaded on the CPS-packet, encryption and decryption, compression and extension, protocol conversion, and media conversion. (col. 11 line 62 - col. 12 line 9) As such, the AAL2 SSCS layer may be terminated.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Paajanen et al., Jarl, and Yoshihiro of to include the DSPs acting as transcoders for digital representation of speech, transcoding the digital representations of speech of the call in the respective DSP from a first encoding to a second encoding, and the AAL2 SSCS layer being terminated on a per call basis at a respective DSP as suggested by Toyama et al. because it allows a voice call payload to be processed at an upper layer, and converted to a second format that is required by an endpoint.

Response to Arguments

Applicant's arguments with respect to the independent claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN ROBERTS whose telephone number is (571)272-3095. The examiner can normally be reached on M-F 10:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DANIEL RYMAN can be reached on (571) 272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BSR
12/12/2009

/Daniel J. Ryman/
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